



**Animal and Plant Health Inspection Service**  
Pest Management - Plant Health Programs – Program Update

Program: *Phytophthora ramorum*

Date: June 2012

**APHIS *Phytophthora ramorum* Program 2012, 2nd Quarter Summary**

**Background and History:**

The APHIS-PPQ *P. ramorum* regulatory program initiated with the First Interim Rule February 14, 2002, is now in its 10<sup>th</sup> year. Currently 14 counties in California and 202 square miles in Curry County, in Oregon are designated as quarantine areas for *P. ramorum* regulated articles. The remaining counties in California and Oregon, and the entire state of Washington are designated as regulated areas for inter-state shipment of nursery stock. **Presence of *P. ramorum* in the environment has not caused disease outbreaks in the forest landscape outside the currently quarantined areas in CA and OR.** The USDA *P. ramorum* quarantine program, in place since 2002, has been successful in limiting the pathogen's artificial spread into the environment beyond the currently quarantine areas. The *P. ramorum* program in consultation with stakeholders has funded and developed several survey and remediation protocols, outreach and training initiatives. These efforts have benefitted the nursery industry by assuring the commercial movement of disease-free plants.

Between, January 1<sup>st</sup> to June 30, 2012 *P. ramorum* has been reported in 4 (CA, OR, WA, NC) states of which, one detection was in the non-regulated states of NC. *P. ramorum* was detected in 26 nurseries in total, in 13 inter-state shipping and 13 non-interstate shipping nurseries. Only 9 of the 13 interstate shippers actually shipped interstate. Details are provided in this report.

**Program Updates:**

***P. ramorum* Farm Bill Projects:**

Several (9) *P. ramorum* suggestions totaling \$1.5 m was funded through the 10201 Farm Bill Program. Details of the Farm bill and spending plans announcement (May 24, 2012) can be accessed through the web link,

[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/pest\\_detection/farm\\_bill.shtml](http://www.aphis.usda.gov/plant_health/plant_pest_info/pest_detection/farm_bill.shtml)

**Briefly, the suggestions were:**

1) PPQ: *P. ramorum* Program directed surveys in non-regulated states(\$420,000) in AL, GA, KY, LA, MI, OH, SC, TN, TX, VA and WV. The states were selected based on one or more of the following criteria: a) having high-risk environments, b) large nursery industry shipping interstate high-risk hosts, c) presence of *P. ramorum* in streams.

2) National Ornamental Research Site at Dominican University (NORS-DUC), CA: \$667,396. The details of the work at the experimental nursery can be accessed through the web link; <http://www.dominican.edu/academics/hns/sciencemath/community-partnerships-and-initiatives/norsduc>

3) California Department of Agriculture CDFA: Survey of Best Management Practices in California Nurseries \$30,000

- 4) CDFA: Coordination of outreach activities of research conducted at NORS-DUC: \$50,000
- 5) PPQ-CPHST: Assessment of disinfectants for control of *P. ramorum*: \$125,000
- 6) PPQ: CPHST-Confirming pathogenicity and host range of *P. ramorum*: \$70,187
- 7) Washington State University: Developing bio-filtration systems to reduce spread of *P. ramorum* from nurseries: \$74,560.
- 8) USDA-Agriculture Research Service: Validating commercial formulations of *Trichoderma* against *P. ramorum*: \$47,000
- 9) Oregon State University: Soil Mitigation of *P. ramorum*: \$70,000

**Regulatory: Advance Notification Federal Order Review completed:**

APHIS-PPQ has completed the review to measure the success of the Advance Notification Federal Orders (DA-2011-04 dated Jan 28<sup>th</sup>, 2011 and DA-2011-10 dated Feb 25<sup>th</sup> 2011) requiring interstate shipping nurseries moving certain *Phytophthora ramorum* host nursery stock from all quarantined counties in California and Oregon, and several regulated counties in California, Oregon, and Washington. APHIS needed this input to evaluate whether the Federal Order had accomplished its stated goals which was allowing states receiving *P. ramorum* host nursery stock to assign and prioritize resources, assure rapid response and provide direct traceability for any nursery stock (as defined under 7 CFR 301.92-2) known to be positive for *P. ramorum* and at the same time minimize the impact on nurseries shipping host plants inter-state. The review of the Federal Order was based on two review questionnaires (0579-0377 Form #3 and #4) sent to state regulatory agencies, nursery industry associations and individual nurseries to solicit feedback on the advance notification requirement. There were 115 respondents to the review questionnaire which included 19 from State Regulatory Agencies, and 96 individual nurseries. In addition, comments on the FO were also received from 2 Regional Plant Board and 1 industry association.

The review concluded that, for the most part, the advance notification requirement has not achieved the stated goals and objectives in a nationally unified manner which is allowing states receiving *P. ramorum* host nursery stock to assign and prioritize resources, assure rapid response and provide direct traceability for any nursery stock (as defined under 7 CFR 301.92-2) known to be positive for *P. ramorum*. Several states have indicated that full trace forward information should be provided by PPQ as in the past as they are far more accurate and less burdensome on the states. This would be contrary to the primary objective of the Federal Order, duplication of efforts and burdensome for the industry stakeholders. Advance notification has therefore, not streamlined the traceability nor enabled the states to locate high-risk nursery stock shipped in more rapidly through the use of records provided to them from shippers.

It was evident from the review that the many of the non-regulated states do not have the resources to manage and use the information provided by the advance notification process and PPQ is also faced with its own resource and staffing issues to take on the task. The majority of the regulated nurseries will continue to notify manually and will be prone to errors. Auditing compliance either at the shipping or the receiving end will therefore continue to be challenging. In addition, the perceived added benefits of rapid response and direct traceability through the FO could not be validated. The supply chain from invoicing to shipping of host plants to multiple-destinations is highly complex hindering uniformity of industry compliance.

### Nursery Detections to date (2000 – June, 2012)

Year	# Nurseries	# States	Notes
2000, and prior	Zero		There were no reported nursery detections prior to 2001
2001	One	California	In infested area
2002	Zero		
2003	20	3	CA, OR, WA
2004	176	21	125 linked to one nursery's shipments
2005	99	7	
2006	62	11	
2007	23	6	
2008	28	8	
2009	26	11	Also, 6 landscape detections in 4 states; Data 2009 , Dec 31st
2010	34	13	33 nurseries, and 1 greenhouse, 2 landscape detections.
2011 Jan-Dec	23	5	23 nursery detections, 1 residential, 1 landscape
2012 Jan-June	25	4	Detections were in nurseries located in CA, OR, WA and NC. 1 Residential find in WA

### Details of detections from January to March 31, 2012:

Between, January 1<sup>st</sup> to June 30, 2012 *P. ramorum* has been reported from 4 states. Of these 13 were inter-state shippers and 13 were retail nurseries in CA (6), OR (9), WA (10) and NC (1). Interstate shippers were located in CA (2), OR (4), WA (7) and the non-interstate shippers were located in CA (4), OR (5), WA (3) and NC (1). Unusual for 2012 was that 38% (10) of the finds were first time detections, which were located in CA (3), OR (5), WA (2), the other 61% (16) were repeat nurseries. The residential find in WA was traced back to a previously positive shipper in WA.

State Regulated: R Non-regulated: NR	Total number of positive nurseries	Total number of Positive Interstate shippers	Total number of Interstate shippers Newly <sup>1</sup> Positive	Total number of Positive Non- interstate shippers	Total number of Non- interstate shippers Newly <sup>1</sup> Positive
California-R	6	2	1	4	2
Oregon-R	9	4	3	5	2
Washington-R	10	7	1	3	1
North Carolina	1	-	-	1	0

<sup>1</sup>Detected for the first time in 2012

**Detections in Plant Species Jan – June 30, 2012**

High Risk Hosts 85%: (58): *Rhododendron* (29), *Camellia* (11); *Viburnum* (10); *Pieris* (6); *Kalmia* (2). Other Hosts 15% (10): *Cornus* (1); *Gaultheria* (1); *Hamamelis* (1); *Loropetalum* (2); *Magnolia* (3); *Trachelospermum* (1); *Prunus* (1). *P. ramorum* was also detected in Potting Media (OR 2); Soil (Total 4; OR 3 and WA 1); Water (WA-5).

**Positive Detections vs. Plant Species Jan – June 30, 2012**

Plant Genus/Species/Variety	State	County	County Status	Date Confirmed
<i>Camellia japonica</i> 'Grand Prix'	OR	Marion	Regulated	4/13/2012
<i>Camellia japonica</i> 'Mathotiana'	CA	San Joaquin	Regulated	4/27/2012
<i>Camellia japonica</i> 'Bella Rose'	CA	San Joaquin	Regulated	4/27/2012
<i>Camellia japonica</i> 'Mrs. Tingley'	OR	Lane	Regulated	5/31/2012
<i>Camellia japonica</i> 'Pink Parade'	CA	Sacramento	Regulated	6/15/2012
<i>Camellia sasanqua</i>	NC	Mecklenburg	Non-Regulated	4/23/2012
<i>Camellia sasanqua</i>	OR	Polk	Regulated	5/14/2012
<i>Camellia sasanqua</i> 'Mr. Otto'	WA	King	Regulated	6/20/2012
<i>Camellia sasanqua</i> 'Cleopatra'	CA	San Joaquin	Regulated	4/27/2012
<i>Camellia</i> sp.	OR	Polk	Regulated	5/1/2012
<i>Camellia</i> sp.	CA	Mendocino	Quarantine	6/4/2012
<i>Cornus kousa</i>	OR	Polk	Regulated	5/14/2012
<i>Gaultheria procumbens</i>	WA	Lewis	Regulated	5/24/2012
<i>Hamamelis intermedia</i>	OR	Polk	Regulated	5/14/2012
<i>Kalmia latifolia</i>	OR	Polk	Regulated	5/1/2012
<i>Kalmia latifolia</i>	OR	Curry	Quarantine	6/1/2012
<i>Loropetalum chinense</i>	CA	Orange	Regulated	4/13/2012
<i>Loropetalum chinensis</i> 'Rubrum'	CA	Sacramento	Regulated	5/3/2012
<i>Magnolia grandiflora</i>	OR	Polk	Regulated	5/14/2012
<i>Magnolia grandiflora</i> var. Dwf. Southern	WA	King	Regulated	5/24/2012
<i>Magnolia grandifolia</i>	OR	Marion	Regulated	6/7/2012
<i>Pieris japonica</i>	OR	Curry	Quarantine	6/1/2012
<i>Pieris japonica</i>	OR	Curry	Quarantine	6/7/2012
<i>Pieris</i> 'Mountain Fire'	WA	Pierce	Regulated	4/18/2012
<i>Pieris</i> sp.	OR	Washington	Regulated	5/17/2012
<i>Pieris</i> sp.	OR	Washington	Regulated	4/13/2012
<i>Pieris</i> sp.	WA	Pierce	Regulated	5/3/2012
Potting Media	OR	Washington	Regulated	5/17/2012
Potting Media	OR	Curry	Quarantine	6/28/2012
<i>Prunus laurocerasus</i>	OR	Polk	Regulated	5/14/2012
<i>Rhododendron</i> 'Anna Rose Whitney'	WA	King	Regulated	6/20/2012
<i>Rhododendron</i> 'Baden Baden'	OR	Washington	Regulated	4/13/2012
<i>Rhododendron</i> 'Bessie Howell'	OR	Curry	Quarantine	6/1/2012
<i>Rhododendron</i> 'Betty Bob'	OR	Curry	Quarantine	6/13/2012
<i>Rhododendron</i> 'Black Sport'	OR	Curry	Quarantine	6/1/2012
<i>Rhododendron</i> 'Boule de Neige'	CA	Sacramento	Regulated	6/18/2012
<i>Rhododendron</i> 'Edith Bosley'	WA	King	Regulated	6/12/2012
<i>Rhododendron</i> 'Maximum Roseum'	OR	Curry	Quarantine	6/1/2012

<b>Plant Genus/Species/Variety</b>	<b>State</b>	<b>County</b>	<b>County Status</b>	<b>Date Confirmed</b>
<i>Rhododendron</i> 'Purple Splendor'	WA	Skagit	Regulated	6/13/2012
<i>Rhododendron</i> 'Seta'	OR	Curry	Quarantine	6/13/2012
<i>Rhododendron</i> 'Unique'	WA	King	Regulated	6/12/2012
<i>Rhododendron</i> 'Bruce Brechtbill'	WA	Pierce	Regulated	5/9/2012
<i>Rhododendron</i> 'Bruce Brechtbill'	WA	Pierce	Regulated	5/17/2012
<i>Rhododendron</i> 'Bruce Brechtbill'	WA	Thurston	Regulated	3/30/2012
<i>Rhododendron</i> 'Electra'	OR	Lincoln	Regulated	5/17/2012
<i>Rhododendron</i> 'Holden'	OR	Polk	Regulated	4/27/2012
<i>Rhododendron</i> 'Lord Roberts'	WA	King	Regulated	5/24/2012
<i>Rhododendron</i> 'OSU'	OR	Lincoln	Regulated	5/17/2012
<i>Rhododendron</i> 'Purple Passion'	WA	King	Regulated	5/24/2012
<i>Rhododendron</i> 'Scintillation'	WA	Clallam	Regulated	5/16/2012
<i>Rhododendron</i> 'Snow Lady'	WA	Clark	Regulated	6/28/2012
<i>Rhododendron</i> sp.	CA	Orange	Regulated	4/13/2012
<i>Rhododendron</i> sp.	OR	Lincoln	Regulated	4/20/2012
<i>Rhododendron</i> sp.	OR	Washington	Regulated	5/17/2012
<i>Rhododendron</i> sp.	OR	Marion	Regulated	6/15/2012
<i>Rhododendron</i> sp.	OR	Marion	Regulated	6/29/2012
<i>Rhododendron</i> sp.	WA	King	Regulated	6/27/2012
<i>Rhododendron</i> 'Trewithen Orange'	OR	Lincoln	Regulated	5/17/2012
<i>Rhododendron</i> 'Unique'	WA	Skagit	Regulated	6/8/2012
Soil (substrate)	OR	Washington	Regulated	5/17/2012
Soil (substrate)	OR	Tillamook	Regulated	6/6/2012
Soil (substrate)	OR	Washington	Regulated	6/28/2012
Soil (substrate)	WA	Pierce	Regulated	6/25/2012
<i>Trachelospermum jasminoides</i>	CA	Orange	Regulated	4/13/2012
<i>Viburnum bodnantense</i>	OR	Polk	Regulated	5/14/2012
<i>Viburnum cinnammomifolium</i>	OR	Washington	Regulated	5/17/2012
<i>Viburnum davidii</i>	OR	Tillamook	Regulated	4/27/2012
<i>Viburnum</i> sp.	OR	Washington	Regulated	4/13/2012
<i>Viburnum tinus</i>	OR	Marion	Regulated	4/13/2012
<i>Viburnum tinus</i>	OR	Washington	Regulated	4/13/2012
<i>Viburnum tinus</i>	OR	Polk	Regulated	4/27/2012
<i>Viburnum tinus</i>	WA	Pierce	Regulated	3/30/2012
<i>Viburnum tinus</i> 'Lucidum'	WA	King	Regulated	4/18/2012
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento	Regulated	6/6/2012
Water	WA	Clark	Regulated	5/11/2012
Water	WA	Clark	Regulated	5/24/2012
Water	WA	Thurston	Regulated	5/9/2012
Water	WA	Thurston	Regulated	5/9/2012
Water	WA	King	Regulated	6/13/2012

**Dated: June 30, 2012,** Prakash K. Hebbar *Phytophthora ramorum* National Program Manager,  
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